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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/329,775	06/10/1999	WALTER BONNEAU	2322-0486	8536

7590 05/30/2002

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EXAMINER
SHIMIZU, MATSUICHIRO

ART UNIT	PAPER NUMBER
2635	

DATE MAILED: 05/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/329,775	BONNEAU ET AL.	
	Examiner	Art Unit	
	Matsuichiro Shimizu	2635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 June 1999* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *1-6,8-16,20,24-30 and 36-39* is/are allowed.

6)☒ Claim(s) *7,19,21,22 and 31-34* is/are rejected.

7)☒ Claim(s) *17,18,23 and 35* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *5,6* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The addition of the word "type" in claim 34 (line 8) to an otherwise definite expression extends the scope of expression so as to render it indefinite. See MPEP 2173.05 (b) E.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 7, 21-22 and 31 are rejected under 35 U.S.C. 102(b) as being anticipated by Elliott et al. (5,036,461).

Regarding claim 7, Elliott discloses a method of establishing a communication link between a central computer system and a smart card, the communication link using a valid smart card communication protocol of a plurality of smart card communication protocols, the method comprising the steps of: polling a communication channel using a plurality of smart card communication protocols (col. 7, lines 53-65 and col. 8, lines 24-45, polling the available modules or protocols); identifying the valid smart card communication protocol when a valid acknowledgment message is received through the communication channel (col. 7, lines 53-65 and col. 8, lines 24-45, polling the available modules or protocols and identifying the valid protocol with the identification (ID)); and establishment of the communication link (col. 7, line 66 to col. 8, line 13, execution of selected module or program).

Regarding claims 21-22, Elliotte discloses demodulating a first incoming, a second incoming data and a third incoming data signals in accordance with respective protocol (Fig. 3, col. 8, lines 24-45, selecting a module (or a protocol) by polling three modules (28, 32, 36), and demodulating the incoming signal for transaction terminal microprocessor (18))

Regarding claim 31, Elliott discloses a method of communicating with a non-contact smart card (Fig. 3, IC card) comprising the steps of: demodulating an incoming radio frequency signal (col. 8, lines 24-45, power extraction via demodulating incoming signal); transmitting the incoming data signal to a master module (col. 8, lines 24-45, card ID is transmitted to a transaction terminal (10)); identifying a smart card communication protocol (col. 8, lines 24-45, selection of specific protocol by polling the available modules) and transmitting to said smart card communication device (col. 8, lines 24-45, microprocessor transmitting signals to the interface (16)); and modulating (col. 8, lines 24-45, modulation in interface to be transmitted to IC card (12)) an outgoing radio frequency signal.

Claims 32-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Jun (WO 97/00501).

Regarding claim 32, Jun discloses a method of communicating with a non-contact smart card comprising the steps of: establishing a radio frequency communication channel (lines17-24, page 5, communication establishment) between a smart card communication device (Fig. 2, card terminal (70)) and the non-contact smart card (Fig. 2, smart card (40)); establishing a data channel between the smart card communication device and a remotely located master module (Fig. 2, card terminal (70) and terminal computer (80) or central computer (90)); and establishing

a secure communication channel between the master module and the smart card (lines 4-18, page 7, using secret number via a key pad establishes the a secure communication channel).

Regarding claim 33, Jun discloses the step of establishing the radio frequency channel comprises the steps of: demodulating an incoming radio frequency signal transmitted from the smart card to produce an incoming bit data stream (Fig. 6, RF card communication module (72) demodulates the modulated signal from RF card (40), whereby RF card modulate the signal (Fig. 5, modulator (53)); and modulating an outgoing bit data stream transmitted from the master module to produce an outgoing radio frequency signal (Fig. 6, RF card communication module (72) modulates the modulated signal from RF card (40), whereby RF card demodulate the signal (Fig. 5, demodulator (53)).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jun (WO 97/00501) in view of Montgomery et al. (6,157,966).

Regarding claim 34, June continues, as disclosed in claim 33, to disclose the step of establishing the radio frequency channel. But June is silent on arranging the incoming bit data stream into a plurality of incoming data packet; and appending a header to at least one of the plurality of incoming data packets, the header including information indicating a security device type.

However, Montgomery disclose, in the art of data transmission security system, arranging the incoming bit data stream into a plurality of incoming data packet; and appending a header to at least one of the plurality of incoming data packets, the header including information indicating a security device type (col. 5, lines 1-5, multiple packets; col. 6, TABLE 1, adding secure ID). Therefore, it would have been obvious to a person skilled in the art at the time the invention was made to arranging the incoming bit data stream into a plurality of incoming data packet; and appending a header to at least one of the plurality of incoming data packets, the header including information indicating a security device type in the device of Jun as evidenced by Montgomery because Jun suggest the step of establishing the radio frequency channel and Montgomery teaches arranging the incoming bit data stream into a plurality of incoming data packet; and appending a header to at least one of the plurality of incoming data packets, the header including information indicating a security device type to provide secure communication.

Allowable Subject Matter

1. The following is an examiner's statement of reasons for allowance:

Regarding claim 1, the prior arts fail to teach or fairly suggest a method of establishing a communication link between a communication device and a smart card adapted to communicate using a valid smart card communication protocol is one of a plurality of smart card communication protocols, the method comprising the steps of:

transmitting a plurality of initiation messages, wherein each of plurality of initiation messages corresponds to each of the plurality of smart card protocols; and

receiving an acknowledgment message in accordance with the valid smart card communication protocol from the smart card.

Claims 2-6 and 30 are directly/ or indirectly dependent on claim 1 therefore, the prior arts fail to teach or fairly suggest claims 2-6 and 30 for same reason that the prior arts fail to teach or fairly suggest claim 1.

Regarding claim 8, the prior arts fail to teach or fairly suggest instructing a digital signal processor to generate an initiation message in accordance with a smart card communication protocol of the plurality of smart card communication protocol; configuring transceiver hardware in accordance with smart card communication protocol; transmitting the initiation message through the communication channel; waiting a predetermined wait period associated with the smart card communication protocol unless the valid acknowledgment message is received; and repeating, for another smart card communication protocol of the plurality of smart card communication protocols, the steps of instructing, configuring the transceiver hardware, transmitting initiation message, and waiting.

Claims 9-11 are directly/ or indirectly dependent on claim 8 therefore, the prior arts fail to teach or fairly suggest claims 9-11 for same reason that the prior arts fail to teach or fairly suggest claim 8.

Regarding claim 12, the prior arts fail to teach or fairly suggest sequentially transmitting a plurality of initiation messages, wherein each of plurality of initiation messages corresponds to each of the plurality of smart card protocols; monitoring a communication channel for an acknowledgment message corresponding to one of the plurality of smart card protocols until acknowledgment message in accordance with the valid smart card communication protocol is received; and establishing the communication link using the valid smart card communication protocols.

Regarding claim 13, the prior arts fail to teach or fairly suggest a smart card communication device comprising: a transceiver having a variable structure responsive to a control signal.

Claims 14-19 are directly/ or indirectly dependent on claim 13, therefore, the prior arts fail to teach or fairly suggest claims 14-19 for same reason that the prior arts fail to teach or fairly suggest claim 13.

Regarding claim 20, the prior arts fail to teach or fairly suggest a transceiver coupled to the digital signal processor and adapted to transmit the plurality of initiation messages in accordance with a modulation type corresponding to an initiation message of the plurality of initiation messages corresponding to a first smart card communication protocol of the plurality of smart card communication protocols.

Regarding claim 24, the prior arts fail to teach or fairly suggest the radio frequency circuit comprising: a first configuration based on a control signal and adapted to acquire a data signal modulated onto an incoming radio frequency signal in accordance with a first smart card communication protocol of the plurality of smart card communication protocols; and a second configuration based on a control signal and adapted to acquire a data signal modulated on to an incoming radio frequency signal in accordance with a second smart card communication protocol of the plurality of smart card communication protocols.

Claims 25-27 are directly/or indirectly dependent on claim 24 therefore, the prior arts fail to teach or fairly suggest claims 25-27 for same reason that the prior arts fail to teach or fairly suggest claim 24.

Regarding claim 28, the prior arts fail to teach or fairly suggest a radio frequency circuit adapted for use in a smart card communication device, the radio frequency circuit comprising: a switch having a first input port coupled to the first mixer, a second input port coupled to an output of the second mixer, and an output port, the switch adapted to couple the first input port to the output port in a first mode and second port to the output port in a second mode, as claimed in dependent claim 28 are not taught nor suggested by the prior art of record.

Claim 29 is directly dependent on claim 28 therefore, the prior arts fail to teach or fairly suggest claim 29 for same reason that the prior arts fail to teach or fairly suggest claim 28.

A method of remotely re-programming a smart card communication device comprising the steps of: transmitting new code through a data channel from central computer system, as claimed in dependent claim 36 are not taught nor suggested by the prior art of record.

Claims 37-39 are directly/ or indirectly dependent on claim 36 therefore, the prior arts fail to teach or fairly suggest claims 37-39 for same reason that the prior arts fail to teach or fairly suggest claim 36.

Claims 17-18, 23 and 35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The digital signal processor comprises: a first demodulator adapted to demodulate the data signal produced by the receiver in accordance with a first smart card communication protocol of the plurality of smart card communication protocols; a second demodulator adapted to demodulate the data signal in accordance with a second smart card communication protocol of the plurality of smart card communication protocols, as claimed in dependent claim 17 are not taught nor suggested by the prior art of record.

Claim 18 is directly dependent on claim 17, therefore, the prior arts fail to teach or fairly suggest claim 18 for same reason that the prior arts fail to teach or fairly suggest claim 17.

A digital signal processor wherein: the first demodulator is a split phase demodulator adapted to demodulate the first incoming data signal modulated using amplitude shift keying modulation for contactless smart cards; and the second modulator is a Costas loop demodulator adapted to demodulate the second incoming data signal modulated using amplitude shift keying modulation for contactless smart cars, as claimed in dependent claim 23 are not taught nor suggested by the prior art of record.

Routing the incoming data to the security device based on the information included in the header, wherein the security device is one of a plurality of security devices within the master module, as claimed in dependent claim 35 are not taught nor suggested by the prior art of record.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matsuichiro Shimizu whose telephone number is (703) 306-5841. The examiner can normally be reached on Monday through Friday from 8:00 AM to 4:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik, can be reached on (703-305-4704). The fax phone number for the organization where this application or proceeding is assigned is (703-305-3988).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703-305-8576).

Matuichiro Shimizu

May 22, 2002

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